

DOCUMENT RESUME

ED 060 069

TM 001 201

TITLE Court Clerk (gov. ser.) 249.368 -- Technical Report on Development of USTES Aptitude Test Battery.

INSTITUTION Manpower Administration (DOL), Washington, D.C. U.S. Training and Employment Service.

REPORT NO TR-S-32

PUB DATE Jun 71

NOTE 15p.

EDRS PRICE MF-\$0.65 HC-\$3.29

DESCRIPTORS *Aptitude Tests; *Clerical Occupations; Clerical Workers; *Cutting Scores; Evaluation Criteria; Job Applicants; *Job Skills; Norms; Occupational Guidance; *Personnel Evaluation; Test Reliability; Test Validity

IDENTIFIERS Court Clerk; GATB; *General Aptitude Test Battery

ABSTRACT

The United States Training and Employment Service General Aptitude Test Battery (GATB), first published in 1947, has been included in a continuing program of research to validate the tests against success in many different occupations. The GATB consists of 12 tests which measure nine aptitudes: General Learning Ability; Verbal Aptitude; Numerical Aptitude; Spatial Aptitude; Form Perception; Clerical Perception; Motor Coordination; Finger Dexterity; and Manual Dexterity. The aptitude scores are standard scores with 100 as the average for the general working population, and a standard deviation of 20. Occupational norms are established in terms of minimum qualifying scores for each of the significant aptitude measures which, when combined, predict job performance. Cutting scores are set only for those aptitudes which aid in predicting the performance of the job duties of the experimental sample. The GATB norms described are appropriate only for jobs with content similar to that shown in the job description presented in this report. A description of the validation sample and a personnel evaluation form are also included. (AG)

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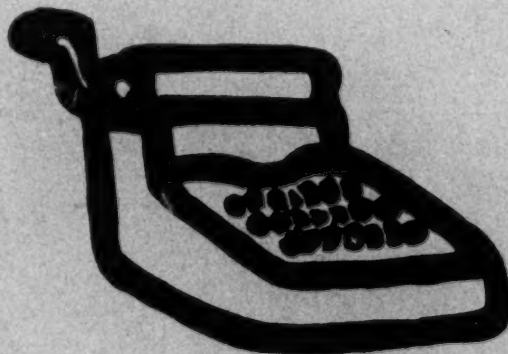
U.S. Training and
Employment Service
Technical Report
S-32

Development of USTES

APTITUDE TEST
BATTERY FOR

COURT CLERK
(gov. ser.)
249.368

U.S. DEPARTMENT OF LABOR
Manpower Administration



Technical Report on Development of USTES Aptitude Test Battery

For

Court Clerk (gov. ser.) 249.368

Court House Assistant (gov. ser.) 249.368

S-32

(Developed in Cooperation with the
New York State Employment Service)

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U. S. Department of Labor
Manpower Administration

June 1971

FOREWORD

The United States Training and Employment Service General Aptitude Test Battery (GATB) was first published in 1947. Since that time the GATB has been included in a continuing program of research to validate the tests against success in many different occupations. Because of its extensive research base the GATB has come to be recognized as the best validated multiple aptitude test battery in existence for use in vocational guidance.

The GATB consists of 12 tests which measure 9 aptitudes: General Learning Ability, Verbal Aptitude, Numerical Aptitude, Spatial Aptitude, Form Perception, Clerical Perception, Motor Coordination, Finger Dexterity, and Manual Dexterity. The aptitude scores are standard scores with 100 as the average for the general working population, with a standard deviation of 20.

Occupational norms are established in terms of minimum qualifying scores for each of the significant aptitude measures which, in combination, predict job performance. For any given occupation, cutting scores are set only for those aptitudes which contribute to the prediction of performance of the job duties of the experimental sample. It is important to recognize that another job might have the same job title but the job content might not be similar. The GATB norms described in this report are appropriate for use only for jobs with content similar to that shown in the job description included in this report.

U. S. Department of Labor
Bureau of Employment Administration

June 1971

Development of USTES Aptitude Test Battery

For

Court Clerk (gov. ser.) 249.368-026

S-32

This report describes research undertaken for the purpose of developing General Aptitude Test Battery (GATB) norms for the occupation of Court Clerk (gov. ser.) 249.368. The plant title of this job is Court House Assistant (gov. ser.) 249.368. The following norms were established:

GATB Aptitudes	Minimum Acceptable GATB Scores
N - Numerical Aptitude	80
Q - Clerical Perception	105
K - Motor Coordination	100

Research Summary

Sample:

51 female workers employed as Court Clerks (Court House Assistants) in New York. One of these were identified as an American Indian. The remainder were nonminority group members.

Criterion:

Supervisory ratings.

Design:

Concurrent (test and criterion data were collected at approximately the same time).

Minimum aptitude requirements were determined on the basis of a job analysis and statistical analyses of aptitude mean scores, standard deviations, aptitude-criterion correlations, and selective efficiencies.

Concurrent Validity:

Phi Coefficient = .46 ($P/2 < .005$)

Effectiveness of Norms:

Only 73% of the nontest-selected workers used for this study were good workers; if the workers had been test-selected with the above norms, 86% would have been good workers. Twenty-seven percent of the nontest-selected workers used for this study were poor workers; if the workers had been test-selected with the above norms, only 14% would have been poor workers. The effectiveness of the norms is shown in Table 1:

TABLE I

Effectiveness of Norms

	Without Tests	With Tests
Good Workers	73%	86%
Poor Workers	27%	14%

SAMPLE DESCRIPTION

Size:

N = 51

Occupational Status:

Employed Workers.

Work Setting:

Workers were employed in the District Courts, Family Courts or Probation Department in Nassau and Suffolk Counties in New York.

Employer Selection Requirements:

Education: High school graduation

Previous Experience: Nassau County requires 2 years prior experience in clerical occupations. College education may be substituted for experience on a year to year basis.

Tests: Required to pass typing test administered by Division of Employment. Some individuals may have taken special New York State clerical-type exam which included verbal and numerical materials.

Principal Activities:

The job duties for each worker are comparable to those shown in the job description in the Appendix.

Minimum Experience:

All workers in the final sample had at least one month of job experience.

TABLE 2

Means, Standard Deviations (SD), Ranges and Pearson Product-Moment Correlations with the Criterion (r) for Age, Education, Experience, and Cultural Exposure.

	Mean	SD	Range	r
Age (years)	36.2	13.6	17-63	-.113
Education (years)	12.0	.8	8-14	.249
Experience (months)	23.5	28.1	1-73	.096
Cultural Exposure	3.2	1.4	0-6	.057

EXPERIMENTAL TEST BATTERY

All 12 tests of the GATB, B-1002B, and the Research Questionnaire-Background were administered during October, 1970.

CRITERION

The criterion data consisted of supervisory ratings of job proficiency made at approximately the same time as the tests were administered with a time interval of two weeks between the two ratings. The immediate supervisor rated each worker.

Rating Scale:

Form SP-21 "Descriptive Rating Scale" was used. The scale (see Appendix) consists of nine items covering different aspects of job performance. Each item has five alternative responses corresponding to different degrees of job proficiency.

Reliability:

A **correlation** coefficient of .866 was obtained between the initial ratings and the re-ratings, indicating a satisfactory reliability. The final criterion score **consists** of the averaged scores of the two ratings.

Criterion Score Distribution:

Possible Range:	9-45
Actual Range:	11-40
Mean:	30.3
Standard Deviation:	6.1

Criterion Dichotomy:

The criterion distribution was dichotomized into low and high groups by placing 27% of the sample in the low group to correspond with the percentage of workers considered unsatisfactory or marginal. Workers in the high criterion group were designated as "good workers" and those in the low group as "poor workers." The criterion critical score is 28.

APTITUDES CONSIDERED FOR INCLUSION IN THE NORMS

Aptitudes were selected for tryout in the norms on the basis of a qualitative analysis of job duties involved and a statistical analysis of test and criterion data. Aptitudes G, V and N, which do not have high correlations with the criterion, were considered for inclusion in the norms because the qualitative analysis indicated that the aptitudes were important for the job duties and the sample had relatively low standard deviation on these aptitudes. Although aptitude K had only the fifth lowest standard deviation it was considered for inclusion in the norms because the sample had a relatively high mean score on the aptitude and this aptitude has been important in other clerical batteries. Tables 3, 4 and 5 show the results of the qualitative and statistical analyses.

TABLE 3

Qualitative Analysis
(Based on the job analysis, the aptitudes indicated
appear to be important to the work performance)

Aptitudes	Rationale
G - General Learning Ability	Required to recommend appropriate action to the public dependent on an analysis of the type of case, the procedure to be followed and the proper court of jurisdiction based on an understanding of court practices.
V - Verbal Aptitude	Necessary to understand a wide variety of written procedures and interpret such procedures to the public.
N - Numerical Aptitude	Needed to collect and make money calculations, and make correct numerical entries on court documents.
Q - Clerical Perception	Needed to post and maintain accurate court records.

TABLE 4

Means, Standard Deviations (SD), Ranges and Pearson Product-Moment Correlations with the Criterion (r) for the Aptitudes of the GATB; N=51

	Mean	SD	Range	r
G - General Learning Ability	97.2	11.7	69-127	.247
V - Verbal Aptitude	104.4	12.5	84-133	.049
N - Numerical Aptitude	97.1	9.6	71-117	.146
S - Spatial Aptitude	91.5	15.4	61-124	.312*
P - Form Perception	103.5	17.2	67-139	.216
Q - Clerical Perception	117.8	12.8	77-155	.312*
K - Motor Coordination	109.5	14.0	82-140	.265
F - Finger Dexterity	99.9	24.5	41-156	.222
M - Manual Dexterity	90.9	22.4	42-139	.017

*Significant at the .05 level.

TABLE 5

SUMMARY OF QUALITATIVE AND QUANTITATIVE DATA

Type of Evidence	Aptitudes								
	G	V	N	S	P	Q	K	F	M
Job Analysis Data: <u>Important</u>	X	X	X			X			
<u>Irrelevant</u>				X					
Relatively High Mean		X			X	X	X		
Relatively Low Standard Deviation	X	X	X			X	X		
Significant Correlation with Criterion				X		X			
Aptitudes to be Considered for Trial Norms	G	V	N			Q	K		

DERIVATION AND VALIDITY OF NORMS

Final norms were derived on the basis of the degree to which trial norms consisting of various combinations of aptitudes G, V, N, Q and K at trial cutting scores were able to differentiate between the 73% of the sample considered to be good workers and the 27% of the sample considered to be poor workers. Trial cutting scores at five-point intervals approximately one standard deviation below the mean are tried because this will eliminate about one-third of the sample with three-aptitude norms. For four-aptitude trial norms, cutting scores of slightly less than one standard deviation below the means will eliminate about one-third of the sample; for two-aptitude trial norms, minimum cutting scores of slightly more than one standard deviation below the mean will eliminate about one-third of the sample. The Phi Coefficient was used as a basis for comparing trial norms. Norms of N-80, Q-105 and K-100 provided optimum differentiation for the occupation of Court Clerk (gov. ser.) 249.368. The validity of these norms is shown in Table 6 and is indicated by a Phi Coefficient of .46 (statistically significant at the .005 level).

TABLE 6

Concurrent Validity of Test Norms N-80, Q-105, K-100

	Nonqualifying Test Scores	Qualifying Test Scores	Total
Good Workers	5	32	37
Poor Workers	9	5	14
Total	14	37	51

Phi Coefficient = .46

Chi Square (χ^2) = 10.7
Significance Level = $P/2 < .005$

DETERMINATION OF OCCUPATIONAL APTITUDE PATTERN

The data for this study did not meet all the requirements for incorporating the occupation studied into an OAP. However, the occupation was placed as an ** occupation in OAP-58 which is shown in Section II of the Manual for the GATE. A phi coefficient of .26 is obtained when the OAP-58 norms of Q-95, K-90, and F-75 are applied to the sample.

SP-21
Rev. 2/61

A-P-P-E-N-D-I-X

DESCRIPTIVE RATING SCALE
(For Aptitude Test Development Studies)

Score _____

RATING SCALE FOR _____
D. O. T. Title and Code

Directions: Please read Form SP-20, "Suggestions to Raters", and then fill in the items listed below. In making your ratings, only one box should be checked for each question.

Name of Worker (print) _____
(Last) (First)

Sex: Male _____ Female _____

Company Job Title: _____

How often do you see this worker in a work situation

- ☐ See him at work all the time.
- ☐ See him at work several times a day.
- ☐ See him at work several times a week.
- ☐ Seldom see him in work situation.

How long have you worked with him?

- ☐ Under one month.
- ☐ One to two months.
- ☐ Three to five months.
- ☐ Six months or more.

A. How much work can he get done? (Worker's ability to make efficient use of his time and to work at high speed.)

- ☐ 1. Capable of very low work output. Can perform only at an unsatisfactory pace.
- ☐ 2. Capable of low work output. Can perform at a slow pace.
- ☐ 3. Capable of fair work output. Can perform at an acceptable but not a fast pace.
- ☐ 4. Capable of high work output. Can perform at a fast pace.
- ☐ 5. Capable of very high work output. Can perform at an unusually fast pace.

B. How good is the quality of his work? (Worker's ability to do high-grade work which meets quality standards.)

- ☐ 1. Performance is inferior and almost never meets minimum quality standards.
- ☐ 2. The grade of his work could stand improvement. Performance is usually acceptable but somewhat inferior in quality.
- ☐ 3. Performance is acceptable but usually not superior in quality.
- ☐ 4. Performance is usually superior in quality.
- ☐ 5. Performance is almost always of the highest quality.

C. How accurate is he in his work? (Worker's ability to avoid making mistakes.)

- ☐ 1. Makes very many mistakes. Work needs constant checking.
- ☐ 2. Makes frequent mistakes. Work needs more checking than is desirable.
- ☐ 3. Makes mistakes occasionally. Work needs only normal checking.
- ☐ 4. Makes few mistakes. Work seldom needs checking.
- ☐ 5. Barely makes a mistake. Work almost never needs checking.

D. How much does he know about his job? (Worker's understanding of the principles, equipment, materials and methods that have to do directly or indirectly with his work.)

- ☐ 1. Has very limited knowledge. Does not know enough to do his job adequately.
- ☐ 2. Has little knowledge. Knows enough to "get by."
- ☐ 3. Has moderate amount of knowledge. Knows enough to do fair work.
- ☐ 4. Has broad knowledge. Knows enough to do good work.
- ☐ 5. Has complete knowledge. Knows his job thoroughly.

E. How much aptitude or facility does he have for this kind of work? (Worker's adeptness or knack for performing his job easily and well.)

- ☐ 1. Has great difficulty doing his job. Not at all suited to this kind of work.
- ☐ 2. Usually has some difficulty doing his job. Not too well suited to this kind of work.
- ☐ 3. Does his job without too much difficulty. Fairly well suited to this kind of work.
- ☐ 4. Usually does his job without difficulty. Well suited to this kind of work.
- ☐ 5. Does his job with great ease. Exceptionally well suited for this kind of work.

F. How large a variety of job duties can he perform efficiently? (Worker's ability to handle several different operations in his work.)

- ☐ 1. Cannot perform different operations adequately.
- ☐ 2. Can perform a limited number of different operations efficiently.
- ☐ 3. Can perform several different operations with reasonable efficiency.
- ☐ 4. Can perform many different operations efficiently.
- ☐ 5. Can perform an unusually large variety of different operations efficiently.

G. How resourceful is he when something different comes up or something out of the ordinary occurs? (Worker's ability to apply what he already knows to a new situation.)

- ☐ 1. Almost never is able to figure out what to do. Needs help on even minor problems.
- ☐ 2. Often has difficulty handling new situations. Needs help on all but simple problems.
- ☐ 3. Sometimes knows what to do, sometimes doesn't. Can deal with problems that are not too complex.
- ☐ 4. Usually able to handle new situations. Needs help on only complex problems.
- ☐ 5. Practically always figures out what to do himself. Rarely needs help, even on complex problems.

H. How many practical suggestions does he make for doing things in better ways? (Worker's ability to improve work methods.)

- ☐ 1. Sticks strictly with the routine. Contributes nothing in the way of practical suggestions.
- ☐ 2. Slow to see new ways to improve methods. Contributes few practical suggestions.
- ☐ 3. Neither quick nor slow to see new ways to improve methods. Contributes some practical suggestions.
- ☐ 4. Quick to see new ways to improve methods. Contributes more than his share of practical suggestions.
- ☐ 5. Extremely alert to see new ways to improve methods. Contributes an unusually large number of practical suggestions.

I. Considering all the factors already rated, and only these factors, how acceptable is his work? (Worker's "all-around" ability to do his job.)

- ☐ 1. Would be better off without him. Performance usually not acceptable.
- ☐ 2. Of limited value to the organization. Performance somewhat inferior.
- ☐ 3. A fairly proficient worker. Performance generally acceptable.
- ☐ 4. A valuable worker. Performance usually superior.
- ☐ 5. An unusually competent worker. Performance almost always top notch.

FACT SHEET

Job Title: Court Clerk (gov. ser.) 249.368-026
Court House Assistant (gov. ser.) 249.368-026

Job Summary: Performs clerical and typing duties in accordance with well-defined methods and procedures. Types court calendars, lists, summonses, letters and related court papers. Enters and maintains court records. Files and sorts court papers. Answers routine questions in person or by telephone. May operate simple office machines. May receive court fees.

Work Performed: Performs a variety of clerical tasks utilizing knowledge of the court system and its prescribed procedures. Types small claims, weekly and monthly statistical reports and letters, summonses and subpoenas. Prepares transmittal form letters, calendars, dockets and case folders. Types receipts, writes checks and notifications of money received. Compiles and sorts daily, weekly and monthly statistical reports. Prepares case folders, pulls and sorts files and other court documents.

Enters and maintains court records such as calendars, dockets and journals. Examines, corrects and completes court records according to prescribed procedures.

Receives public at reception desk. Determines court of jurisdiction, legal forms and procedure to be followed. Recommends sources of appropriate legal assistance. Listens to complaints and answers questions in person or by phone.

May operate simple office machines such as copying and duplicating machines and the addressograph.

May collect court fees and reconcile cash received against receipt ledger. May audit judgments and calculate correct amounts of money.

Effectiveness of Norms: Only 73% of the nontest-selected workers used for this study were good workers; if the workers had been test-selected with the S-32 norms, 86% would have been good workers. Twenty-seven percent of the nontest-selected workers used for this study were poor workers; if the workers had been test-selected with the S-32 norms, only 14% would have been poor workers.

Applicability of Norms: The aptitude test battery is applicable to jobs which include a majority of the job duties described above.